Wireless Electronic Call Forward Queuing System, Wireless Queue Management System and Emergency Duress System

I Wireless Electronic Call Forward Queuing System

The Miami Dade Aviation Department (MDAD) plans to implement a Wireless Electronic Call Forward Queuing System that can provide electronic call forwarding queue management in the United States Customs and Border Protection (CBP) facility at Miami International Airport (MIA). A new Wireless Electronic Call Forward Queuing System is needed to increase service efficiency by streamlining the way the CBP officers signal customers in queue for service. Initially two remote locations will be outfitted with this type of system, one for the North Terminal (both Passport Control and Baggage Control) and the other for the South Terminal Federal Inspection Stations (FIS) (also, both Passport Control and Baggage Control) is required with an option for a third, when and if the Central Terminal FIS is re-opened.

The Wireless Electronic Call Forward Queuing System must be a compact state-of-the-art electronic queuing system that utilizes wireless technology to call waiting passengers from a queue to a CBP Booth Position (each booth supports two positions or agents) utilizing custom visual, audible and voice instructions. A monitor with booth position numbers, annunciating sounds and voice instructions all advising that the next available Agent is available. A booth position number sign with a light feature that illuminates when available, a different color when occupied and a third color when idle or not in use is also needed and must be integrated into the wireless electronic call forward queue management system.

The system must not interfere with Wi-Fi networks, cell phones, Bluetooth or cordless phone communication. The system must operate independently of the MDAD network or the CBP Network, and should be designed to be "plug-and-play" with little additional infrastructure requirements for quick and easy installation. Communication between the main computer and accessory devices, remote controls, display monitors and light controllers must use wireless protocol.

Each Booth Position/agent will have one 3-button remote. When the button is pressed, a signal is sent to the LCD Monitor to display an arrow that directs customers to the next available Booth Position/agent. A custom audible alert tone and a custom audible voice and text message will display an alert to the waiting passenger in at least three languages (English,

Spanish and Portuguese). The three buttons can correspond to up to three different queues. For example, a queue for Visitors, US Citizens and Visa Waiver would all be queued separately but an Officer could call the next Passenger from anyone of the three queues.

The Wireless Electronic Call Forward Queuing System must have or allow the following:

- A single agent to pull customers from at least three (3) different lines
- Individual wireless remote control
- Flashing lighted indicators with numbers to be permanently affixed to Booths and/or Podiums
- An independent software system structure which allows the Queue Management System to run independently and without interfering with CBP's secure network
- LCD Monitors with versatile video capabilities (not static LED displays) with audio tones as well as multiple language capabilities
- The ability to control not less than eighty (80) station lights and numerous peripheral devices in the North Terminal FIS (including Baggage Control) at MIA
- The ability to control not less than sixty (60) station lights and numerous peripheral devices in the South Terminal at MIA (including Baggage Control)
- Not less than 5 video interrupt modes which will allow full and split screen capabilities
- Be able to play multimedia between prompts

An automation option and process that MDAD would consider would be the use of sensors at specific exit points so that as passengers pass through the designated areas the sensors would trigger the command via wireless connection and call the next passenger forward in lieu of the Officers having to push a button to call the next Passenger. This would be done with infrared technology or other similar type technology, brackets, stanchions or mounting conditions and Wi-Fi Access.

II Wireless Electronic Queue Management System

The Miami Dade Aviation Department (MDAD) plans to implement an Electronic Queue Management System that can provide real-time measurement of queue length and queue waiting time. Wireless and battery powered electronic queue sensors, strategically positioned in the queue area, automatically track and transmit queue line data to a local receiver

that collects the data and transfers it to a web-based application for analysis and interpretation or forecasting. The application integrates the data from sensors to provide real-time queue length, expected wait time, and customer flow of the queue or throughput. This information will be displayed on monitors in the queuing area and also in the Meeter/Greeter area. Additionally this information is displayed via a web-based "dashboard" type environment as well as electronically sent to manager's mobile devices with predefined queue lengths; maximum wait times and other key performance indicators (kpi) are exceeded. This data must also be recorded daily in the dashboard and archived for the creation of predetermined intervals of reporting for future staff resource planning. The application mush have a flexible architecture to permit it to operate on "the cloud" (Software as a Service), on an existing Server/Network infrastructure, or on an independent standalone network and must be accessible by a wide range of browsers such as Microsoft Internet Explorer, Mozilla Firefox, Google Chrome or Apple Safari.

Initially two remote locations will be outfitted with this type of system, one for the North Terminal and the other for the South Terminal Federal Inspection Stations (FIS) is required with an option for a third, when and if the Central Terminal FIS is re-opened. The system must not interfere with Wi-Fi networks, cell phones, Bluetooth or cordless phone communication. The system must operate independently of the MDAD network or the CBP Network, and should be designed to be "plug-and-play" with little additional infrastructure requirements for quick and easy installation. Communication between the main computer and accessory devices, remote controls, display monitors and light controllers must use wireless protocol.
Any other battery operated wireless electronic queue data collection devices that offer the same outputs as described above could also be considered.